

February 9, 2001
Ref. No.: EOS/ETS-0202-C01

National Aeronautics and
Space Administration
Goddard Space Flight Center
Greenbelt, Maryland 20771

Attention: Mr. Willie Fuller
Code 581
Building 32, Room N212D

Subject: Contract No.: NAS9-98100
CSOC ETS Completion Form Task
EOSDIS Test System (ETS) Simulated CCSDS Telemetry Generator
(SCTGEN) -- Delivery of the Patch Release 2.5a Software

Dear Mr. Fuller:

The CSOC contractor is pleased to deliver Patch Release 2.5a of the Simulated CCSDS Telemetry Generator (SCTGEN) of the ETS. Release 2.5a of SCTGEN provides solutions to two Discrepancy Reports (DRs), all in support of PM-1 and ICESat missions.

The delivery package contains 5 attachments as listed below, describing the delivery contents, build instructions, resolved DRs, and release history. A completed Mission Systems Configuration Management (MSCM) form is included.

If you have any questions concerning this delivery, please call me at (301) 805-3609.

Sincerely yours,

Chii-Der Luo
Tools and Special Facilities Manager

Delivery Package Reviewed by:

Joe Polesel
Simulation Group Sustaining Engineer Manager

Delivery of the Release 2.5a Software
February 9, 2001, Ref. No.: EOS/ETS-0202-C01
EOSDIS Test System (ETS) Simulated CCSDS Telemetry Generator

Page Two

The following attachments contain the details of the SCTGEN software.

- Attachment A - contains the instructions to build and install the software
- Attachment B - contains a list of the resolved DRs
- Attachment C - contains the release history summary matrix
- Attachment D - contains a file name listing of the delivery contents
- Attachment E - contains the Mission Systems Configuration Management (MSCM) form

Distribution: (* - Letter Only)

<u>NASA</u>	<u>HTSI</u>	<u>Lockheed Martin</u>	<u>CSC</u>
Fuller, W. *	Bradbury, T.*	Cordier, G.	Noone, E.
Harbaugh, R.*	Luo, C.		Polesel, A.
Iona, G.*	Braun, J. *		Shurie, E.
Johns, A.*	Zarek, J. *	<u>TRW</u>	Swope, J.*
Kelly, A.			Whitesell, S.*
Ondrus, P.*		Tiren, C.	Task File.
ESDIS Library	<u>Unisys</u>		
	Coleman, C.	<u>Raytheon</u>	<u>Caelum</u>
<u>QSS</u>		Singhal, S.	Holmes, D.
Chomko, E.			Siskind, A.
Elfant, C.			
Walters, A.			

Attachment A — Release 2.5a Build Instructions

SCTGEN consists of two elements: (1) the SCTGEN Graphical User Interface, referred to as SCTGUI; and (2) the SCTGEN application software, referred to as SCTGEN. Instructions for building the complete system, SCTGEN Release 2.5a, step by step, are contained in the following sections.

A.1 Introduction

The patch release SCTGEN Release 2.5a consists of 19 source files, which are being delivered on tape media. The file “globals.tcl” will replace the file of the same name in the \$HOME/sctgui2.0/source/tcl directory. The files “CCSDS_Unsegmented.hh” and “Unsegmented.cpp” will replace the files of the same name in the \$HOME/sctgen2.0/CCSDS directory. The files “TigIFileDevice.hh” and “TigIFileDev.cpp” will replace the files of the same name in the \$HOME/sctgen2.0/tcore directory. The files “TigArray.c”, “TigDArray.c”, “TigGoods.c”, “TigMill.c” and “TigRegistry.c” are additions to the \$HOME/sctgen2.0/tcore/template directory. The files “DS_2Output.cpp”, “DS_Output.hh”, “ETS_Version.hh”, “Gap.cpp”, “Gap.hh”, “ICESAT_Time.cpp” and “cuctime_to_cdstime.cpp”, will replace the files of the same name in the \$HOME/sctgen2.0/ETS directory. The files “mksctgen.cmd” and “sgi.mksctgen.cmd” are additions to the \$HOME/sctgen2.0/work directory. Note that SCTGEN Patch Release 2.5a can only be overlaid over SCTGEN Release 2.4 or 2.5. The additions to the \$HOME/sctgen2.0/tcore/template directory are used by the non-sgi machines only. The equivalent files used by the sgi machine are already in place.

A.2 Build SCTGEN

- 1) Change to the \$HOME/sctgen2.0/ETS directory.
- 2) Type “mv cuctime_to_cdstime.c cuctime_to_cdstime.cpp”.
- 3) Type “mv cuctime_to_sctime.c cuctime_to_sctime.cpp”.
- 4) Change to the \$HOME directory.
- 5) Type “tar -xv *”.
- 6) Change to the \$HOME/sctgen2.0/work directory.
- 7) Type “chmod 744 mksctgen.cmd”.
- 8) Type “chmod 744 sgi.mksctgen.cmd”.
- 9) For the SGI platform, type “sgi.mksctgen.cmd all”, for all other platforms type “mksctgen.cmd* all”, to build all of SCTGEN. This will take about 10 to 15 minutes and will generate warning messages.
- 10) Change to the \$HOME/sctgen2.0/work directory and type “cp sctgen ~/sctgui2.0/bin/*platform*.sctgen2.5” to rename the SCTGEN executable, where *platform* is sgi, hp, or sun.
- 11) Change to the \$HOME/sctgui2.0/bin directory.

- 12) Type “rm sctgen” to remove the current executable.
- 13) Type “ln -s ./platform.sctgen2.5 sctgen” to create a link to the executable, where *platform* is sgi, hp, or sun.

*For the HP platform:

For step 9, do not type the sgi prefix.

For steps 10 and 13, replace “hp” for “sgi”, or something comparable to denote host platform.

*For the SUN platform:

For step 9, do not type the sgi prefix.

For steps 10 and 13, replace “sun” for “sgi”, or something comparable to denote host platform.

Note: The file names may not be exactly the same depending on the platform. For example, different UNIX systems might have different header file extensions. Make sure that the correct files are replaced, otherwise, the changes will not take effect.

A.3 Supported platforms

Previous versions of SCTGEN have been built and tested using the environments listed below.

SUN platform:

- SunOS Generic Version 4.3 including C++ compiler for SUN UNIX.

HP platform:

- HP OS Version 9.0 including C++ compiler for HP UNIX.

SGI platform:

- IRIX Version 6.2 including standard CFRONT compatible C++ compiler.

A.4 Special Instructions

Prior to this release, to compile and link all of SCTGEN required two commands. This release provides the capability to compile and link all of SCTGEN, or compile a portion and then link SCTGEN with one command. To compile and link all of SCTGEN, enter “mksetgen.cmd* all” (for HP and SUN platforms), or “sgi.mksetgen.cmd all” (for SGI platform). When “mksetgen.cmd*” or “sgi.mksetgen.cmd” is entered, only the files in the \$HOME/sctgen2.0/ETS directory are compiled and linked to create the new executable.

Attachment B — Resolved Discrepancy Reports

This attachment reflects the DRs that were addressed with SCTGEN Release 2.5a. The DRs are listed in the table below by DR number, status, severity, subsystem name, short description, and related NCR number. A full description of each DR follows the summary table. Complete information on all DRs is maintained in the ESDIS Discrepancy Report Tracking Tool (DRTT), which can be accessed via the Internet at address <http://iree.gsfc.nasa.gov/ddts/> (directly) or from the ESDIS Activities, Progress Reports and Schedules page at <http://spsosun.gsfc.nasa.gov/ESDIHome.html>.

Summary of Closed Discrepancy Reports

Critical(1)	Urgent(2)	Routine(3)
2	0	0

Status Definitions

N - New	A - Assigned Analysis	R – Assigned Resolution
D - Delivered	V - Verified	C - Closed
W - Withdrawn	P - Postponed	X - Duplicate

DR/IDR #	Status	Severity	Subsystem	Description	Related NCR
ETS0434	N	1	SCTGEN	Additional warning messages	
ETS0435	N	1	SCTGEN	Additional warning messages - part 2	

*Total number DRs addressed=2

ETS0434

There are several warning messages regarding template files not found when linking on the HP only. These messages do not appear when linking on the SGI machines.

ETS0435

There are still a few warning messages generated during the compile/link process regarding multiply defined variables 'mypm1' and 'inputpm1'. These may be confusing to users.

Attachment C — Release History Summary Matrix

The attached Release History Summary Matrix reflects the SCTGEN Release 2.5a Delivery.

Release History Summary Matrix									
SYSTEM:	SCTGEN						PAGE	1 OF 2	
RELEASE NUMBER		1.0	1.1.0	1.2.0	1.3.0	1.4.0	1.5.0 (2.0)	2.1	2.2
DELIVERY DATE		3/3/97	5/27/97	8/25/97	2/27/98	6/26/98	9/10/99	11/30/99	2/2/00
CONFIGURATION ITEM	CI NO.								
SCTGEN GUI	5.1	1.0	1.1.0	1.2.0	1.3.0	1.4.0	1.5.0 (2.0)	2.1	2.2
SCTGEN Application Software	5.2	1.0	1.1.0	1.2.0	1.3.0	1.4.0	1.5.0 (2.0)	2.1	2.2

Release History Summary Matrix									
SYSTEM:	SCTGEN						PAGE	2 OF 2	
RELEASE NUMBER		2.3	2.4	2.5	2.5a				
DELIVERY DATE		6/9/00	10/18/00	1/26/01	2/9/01				
CONFIGURATION ITEM	CI NO.								
SCTGEN GUI	5.1	2.3	2.4	2.5	2.5a				
SCTGEN Application Software	5.2	2.3	2.4	2.5	2.5a				

Attachment D- Listing of Delivery Contents

Delivery is on one 4 mm magnetic tape. The contents of the tar tape are listed below. Sections D.1 and D.2 contain the file name listings for the SCTGEN GUI and SCTGEN application software, respectively. Section D.3 contains the file name listings used to build the SCTGEN executable.

D.1 SCTGEN GUI Patch Release 2.5a

globals.tcl

D.2 SCTGEN Application Patch Release 2.5a

CCSDS_Unsegmented.hh

DS_2Output.cpp

DS_Output.hh

ETS_Version.hh

Gap.cpp

Gap.hh

ICESAT_Time.cpp

TigFileDev.cpp

TigFileDevice.hh

Unsegmented.cpp

cuctime_to_cdstime.cpp

TigArray.c

TigDArray.c

TigGoods.c

TigMill.c

TigRegistry.c

D.3 SCTGEN Builder Patch Release 2.5a

mksctgen.cmd

sgi.mksctgen.cmd

Attachment E - Mission Systems Configuration Management Form

This attachment contains the completed Mission Systems Configuration Management (MSCM) form.

Mission Systems Configuration Management Form

<u>1. ORIGINATOR</u> Donald Holmes	<u>2. ORGANIZATION</u> CSOC	<u>3. PHONE</u> (301) 805-3547	<u>4. E-MAIL ADDRESS</u> Donald.Holmes@csconline.com
<u>5. ELEMENT</u> Other =====> SCTGEN		<u>6. INSTALLATION PRIORITY</u> Routine	<u>7. TRACKING NUMBER</u> (Assigned by CM Office)
<u>8. SOURCE CHANGE REQUEST(S):</u> ETS DRB approved SCTGEN release for SMO DR closure.		<u>9. APPROVALS</u> <div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> Element Manager _____ ____/____/____ </div> <div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> Flight Ops Director _____ ____/____/____ </div> <div style="display: flex; justify-content: space-between;"> Operations Manager _____ ____/____/____ </div>	
<u>10. DELIVERED SYSTEM</u> (Check all that apply)			
	Name	Version	Media Identification
<input type="checkbox"/> Hardware	_____	_____	_____
<input checked="" type="checkbox"/> Software	SCTGEN	R2.5a	4 mm tape
<input type="checkbox"/> Database	_____	_____	_____
<input checked="" type="checkbox"/> Documentation:			
	Delivery Package	n/a	Via email
	_____	_____	_____
	_____	_____	_____
<input type="checkbox"/> Other	_____	_____	_____
<u>11. CHANGE DESCRIPTION</u> SCTGEN 2.5a addresses two DRs. None are workarounds. _____ _____ _____			
<u>12. ATTACHMENT(S):</u> Check if YES <input checked="" type="checkbox"/> Description: SCTGEN 2.5a delivery package (cover letter with attachments) dated 2/9/01. _____ _____			
<u>13. CM OFFICE USE</u>			
	Location (Bldg/Room)	Slot location(s)	
Hardware	____/____	_____	
Media	____/____	_____	
Documentation	____/____	_____	
Installation date	____/____/____	CM Office Signature _____	

Form MSCM (970327)